

Appl. No. 10/004,786  
Amtd. Dated May 18, 2005  
Reply to Office action of February 18, 2005  
Attorney Docket No. P13026-US2  
EUS/J/P/05-1124

**Amendments to the Claims:**

This listing of claims replaces all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) Method for power saving in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), used in for accessing a wireless LAN (WLAN), WLAN or the like having one an access point (AP), said card either externally plugged in or built in or integrated in the mobile terminal, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which wherein the mobile terminal uses an operating system supporting a plurality of device power states, e.g. the OnNew device power states (D0-D3), in which said method comprising the steps of:

the mobile terminal requests (I) requesting a transition from an active state D0 to a less active state D3 (or D2 or D1);

upon which request the NIC requests the access point AP to be entered into WLAN sleep state[.] ; and,

on acknowledgement from the access point AP the mobile terminal enters WLAN sleep state.

2. (Cancelled)

3. (Currently Amended) Method for power saving in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), used in for accessing a wireless LAN[.] (WLAN) or the like in an ad hoc network, said card either externally plugged in or built in or integrated in the mobile terminal, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which wherein the mobile terminal uses an operating system supporting a plurality of device power states, e.g. the OnNew device power states (D0-D3), in which said method comprising the steps of:

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the mobile terminal requests (II) requesting a transition from an active state D0 to a less active state D3 (or D2 or D1);

upon which request the NIC requests a further second mobile terminal in the ad hoc network, i.e. ~~the mobile terminal~~ to be entered into WLAN sleep state[[.]]; and,

on acknowledgement from the further second mobile terminal the mobile terminal enters WLAN sleep state.

4. (Cancelled)

5. (Currently Amended) Method for power saving in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), used in for accessing a wireless LAN[[.]] (WLAN), or the like having one an access point (AP), said card either eternally plugged in or built in or integrated in the mobile terminal, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which wherein the mobile terminal uses an operating system supporting a plurality of device power states, e.g. the OnNew device power states (D0-D3), in which said method comprising the steps of:

the mobile terminal, due to inactivity, requests (IV) a transition from an active state D0 to a less active state D3 (or D2 or D1);

upon which request the NIC and/or mobile terminal requests the access point AP to be disassociated and/or de-authenticated from the access point AP; and,

on acknowledgement from the access point AP, the mobile terminal enters a disassociated and/or de-authenticated state.

6. (Cancelled)

7. (Currently Amended) Method according to claim 1 in which the mobile terminal/NIC is disassociated and/or de-authenticated from the AP without using a disassociation and/or de-authentication signal.

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8. (Currently Amended) Method for power saving in a mobile terminal comprising a ~~NIC~~, wireless Network Interface Card (~~NIC~~), used in for accessing a wireless LAN[[],] (WLAN) or the like in an ad hoc network, ~~said card either externally plugged in or built in or integrated in the mobile terminal~~, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which ~~wherein the~~ mobile terminal uses an operating system supporting a plurality of device power states, e.g. the ~~OnNow~~ device power states (D0-D3), in which said method comprising the steps of:

the mobile terminal, due to inactivity, requests (II) a transition from an active state D0 to a less active state D3 (or D2 or D1);

upon which request the ~~NIC and/or~~ mobile terminal requests a further ~~second~~ mobile terminal in the ad hoc network to be disassociated and/or de-authenticated from the ad hoc network; and,

on acknowledgement from the further ~~second~~ mobile terminal, the mobile terminal enters a disassociated and/or de-authenticated state.

9. (Cancelled)

10. (Currently Amended) Method according to claim 3 in which the mobile terminal/~~NIC~~ is disassociated and/or de-authenticated from the ad hoc network without using a disassociation and/or de-authentication signal.

11. (Currently Amended) Method according to claim 1 in which the mobile terminal/~~NIC~~ associates and/or authenticates to the access point AP on transition from a less active state D3 (or D2 or D1) to D0 a more active state.

12. (Currently Amended) Method according to claim 3 in which the mobile terminal/~~NIC~~ joins an ad hoc network by associating and/or authenticating to the ad hoc network on transition from a less active state D3 (or D2 or D1) to D0 a more active state.

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13. (Currently Amended) Method for power saving in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), used in for accessing a wireless LAN[,] (WLAN) or the like having one an access point (AP), said card either externally plugged in or built in or integrated in the mobile terminal wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which wherein the mobile terminal uses an operating system supporting a plurality of device power states, e.g. the OnNow device power states (D0-D3), in which said method comprising the step of:

the mobile terminal forces forcing the NIC down to D3 cold or D3 initialise a less active state at a point of time later than a time-out interval due to inactivity as defined in said power save procedures in order to lower the system state.

14. (Original) Method for power saving according to claim 13, in which the method also comprises the step of the mobile terminal forcing the NIC from D3 cold or D3 initialise to a higher power state, when activity is detected or when data is pending for transmission.

15. (Original) Method according to claim 13 in which a timer in the mobile terminal is used to initiate the mobile terminal to power down the NIC.

16. (Original) Method according to claim 1 in which the NIC enters its lowest power consumption mode.

17. (Currently Amended) Method for power control in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), used in for accessing a wireless LAN[,] (WLAN) or the like having one an access point (AP), said card either externally plugged in or built in or integrated in the mobile terminal/PC, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in which die wherein the mobile terminal uses an operating system supporting a plurality of

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device power states, e.g. the ~~OnNow~~ device power states (D0-D3), in which said method comprising the steps of:

the mobile terminal, being when in a low power mode, e.g. D3, D2, or D1, requests transition to an active state D0;<sub>i</sub>

upon which request the NIC requests the access-point AP to be entered into WLAN active state[[],]; and,

in-which the mobile terminal enters the WAN active state on acknowledgement from the access-point AP.

18. (Currently Amended) Method for power control in a mobile terminal comprising a NIC, wireless Network Interface Card (NIC), said card either externally plugged in or built in or integrated in the mobile terminal, and used in for accessing a wireless LAN[[],] WLAN or the like in an ad hoc network, said network comprising at least one further a second mobile terminal, wherein the WLAN uses HIPERLAN Type 2 or IEEE 802.11 power save procedures and in-which wherein the mobile terminal uses an operating system supporting a plurality of device power states, e.g. the ~~OnNow~~ device power states (D0-D3), in which said method comprising the steps of:

the mobile terminal, being in a low power mode, e.g. D3, D2, or D1, requests transition to an active state D0;<sub>i</sub>

upon which request the NIC requests the further second mobile terminal to be entered into WLAN active state[[],]; and,

in-which the mobile terminal enters the WLAN active state on acknowledgement from the further second terminal.

19. (Currently Amended) Method according to claim 5 in which the mobile terminal/NIC is disassociated and/or de-authenticated from the AP without using a disassociation and/or de-authentication signal.

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20. (Currently Amended) Method according to claim 8 in which the mobile terminal/NIC is disassociated and/or de-authenticated from the ad hoc network without using a disassociation and/or de-authentication signal.

21. (Currently Amended) Method according to claim 5 in which the mobile terminal/NIC associates and/or authenticates to the access point AP on transition from a less active state ~~D3 (or D2 or D1)~~ to D0 a more active state.

22. (Currently Amended) Method according to claim 8 in which the mobile terminal/NIC joins an ad hoc network by associating and/or authenticating to the ad hoc network on transition from a less active state ~~D3 (or D2 or D1)~~ to D0 a more active state.

23. (Original) Method according to claim 3 in which the NIC enters its lowest power consumption mode.

24. (Original) Method according to claim 5 in which the NIC enters its lowest power consumption mode.

25. (Original) Method according to claim 8 in which the NIC enters its lowest power consumption mode.

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